Formula Sheet
Grade 9 Applied

| Geometric Figure | Perimeter | Area |
| :---: | :---: | :---: |
| Rectangle | $P=l+l+w+w$ <br> or $P=2(l+w)$ | $A=l w$ |
| Parallelogram | $P=b+b+c+c$ <br> or $P=2(b+c)$ | $A=b h$ |
| Triangle | $P=a+b+c$ | $A=\frac{b h}{2}$ <br> or $A=\frac{1}{2} b h$ |
| Trapezoid | $P=a+b+c+d$ | $A=\frac{(a+b) h}{2}$ <br> or $A=\frac{1}{2}(a+b) h$ |
| Circle | $\begin{aligned} & C=\pi d \\ & \text { or } \\ & C=2 \pi r \end{aligned}$ | $A=\pi r^{2}$ |


| Geometric Figure | Volume |
| :---: | :---: |
| Cylinder | $V=(\text { area of base })(\text { height })$ $V=\pi r^{2} h$ |
| Sphere | $V=\frac{4}{3} \pi r^{3} \quad \text { or } \quad V=\frac{4 \pi r^{3}}{3}$ |
| Cone | $V=\frac{(\text { area of base })(\text { height })}{3}$ $V=\frac{1}{3} \pi r^{2} h \quad \text { or } \quad V=\frac{\pi r^{2} h}{3}$ |
|  | $V=\frac{(\text { area of base })(\text { height })}{3}$ $V=\frac{1}{3} b^{2} h \quad \text { or } \quad V=\frac{b^{2} h}{3}$ |
| Rectangular prism | $V=(\text { area of base })(\text { height })$ $V=l w h$ |
| Triangular prism | $V=($ area of base $)($ height $)$ $V=\frac{1}{2} b l h \quad \text { or } \quad V=\frac{b l h}{2}$ |

